

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1.-11. (Canceled)

12. (New) Method for separating a useful layer, initially attached by a sacrificial layer to a layer forming a substrate, method comprising at least partial etching of the sacrificial layer, doping, before etching of the sacrificial layer, of at least a part of the surface of at least one of the layers in contact with the sacrificial layer and, after etching of the sacrificial layer, a superficial etching phase of said surface so as to increase the roughness of the doped part of the surface, method comprising deposition, before doping, of a mask on at least a predetermined part of the useful layer so as to delineate at least one doped zone and at least one non-doped zone of said surface, one of said zones forming a stop after the superficial etching phase.

13. (New) Method according to claim 12, wherein, said surface intrinsically comprising doping elements of a predetermined type, doping is performed by doping elements of the same type, the stop being formed by the non-doped zone.

14. (New) Method according to claim 12, wherein, said surface intrinsically comprising doping elements of a predetermined type, doping is performed by doping elements of opposite type, the stop being formed by the doped zone.

15. (New) Method according to claim 12, wherein the mask is delineated by photolithography.

16. (New) Method according to claim 15, wherein the photolithography has a resolution of about 0.3 micrometers.

17. (New) Method according to claim 12, comprising, after doping, an epitaxy step increasing the thickness of the useful layer.

18. (New) Method according to claim 12, wherein doping is performed by ion implantation, the doping elements being taken from the group comprising Boron, Phosphorus and Arsenic.

19. (New) Method according to claim 12, wherein superficial etching is performed by an aqueous solution containing $K_2Cr_2O_7$ and HF.

20. (New) Method according to claim 12, wherein the sacrificial layer is completely etched before the superficial etching phase of said surface.

21. (New) Method according to claim 12, comprising after doping and before the superficial etching phase of said surface, partial etching of the sacrificial layer so as to leave at least one spacer block between the layer forming the substrate and the useful layer, the superficial etching phase of said surface using the spacer block as mask, so as to form at least one stop in said surface,

removal of said spacer block,
an additional superficial etching phase of said surface so as to increase the roughness of
the surface of the stop.

22. (New) Component comprising a suspended useful layer, attached by fixing means to a substrate, obtained by a method according to claim 12.